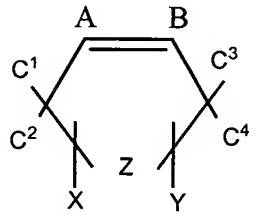
WHAT IS CLAIMED IS:

1. A film comprising at least one layer, the layer comprising an oxygen scavenger composition comprising a condensation polymer and a transition metal salt, compound or complex, wherein said polymer comprises mer units derived from

(A) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by hydrogen, hydrocarbyl, X and/or Y group(s) or mixtures thereof to fill its valence state;

X and Y each independently represents $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is hydrogen atom or a C_1-C_{12} alkyl group, or X and Y together represent $-(CH_2)_n-C=O)_x-D$ with x being 2, n being an integer in the range from 0 to 20 and D is oxygen atom; and

Z representing a $-(C_tH_{2t-2})-$ hydrocarbylene group with t being an integer in the range from 1-4;

(B) at least one or a mixture of difunctional hydrocarbon compounds according to the following representation:

$$G\text{-}R'\text{-}G$$

wherein

R' represents a C_5 or greater hydrocarbon group selected from alkylene, cycloalkylene or arylene group, and

each G represents a hydroxyl or an amino group;

(C) at least one or a mixture of polyfunctional hydrocarbon compounds according to the following representation:

$$J\text{-}R''(\text{-}J)_z$$

wherein

R" represents a C_2-C_{20} hydrocarbon group selected from alkylene, cycloalkylene, arylene, alkarylene or aralkylene groups or mixtures thereof;

J represents a functional group selected from -OH, $-NH_2$, -N=C=O and $-(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR'" group, wherein R'" is an -H, or C_1-C_{12} alkyl group, or two J groups together represents $-(CH_2)_n$-C=O)$_x$-D with n being an integer of from 0 to 20, D being an oxygen atom and x being 2;

z is an integer of from 2 to 5; and

(D) at least one or a mixture of monomer compounds selected from isophthalic acid, terephthalic acid, tetrahydroisophthalic acid, tetrahydroterephthalic acid, hydrogenated isophthalic acid, hydrogenated terephthalic acid, C_1-C_{12} alkyl esters thereof, anhydride derivatives thereof, and hydrocarbyl derivatives thereof and lower C_1-C_5 glycol ester derivatives thereof.

2. The film of claim 1 wherein monomer (A) is selected from *cis*-1,2,3,6-tetrahydrophthalic anhydride; and dimethyl-1,2,3,6-tetrahydrophthalate.

3. The film of claim 1 wherein monomer (B) is selected from 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol and mixtures thereof.

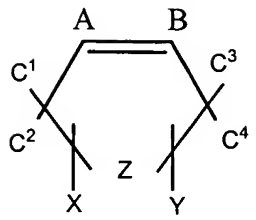
4. The film of claim 1 wherein the monomer (C) is selected from benzenepentacarboxylic acid, benzenehexacarboxylic acid, trimellitic anhydride, pyromellitic dianhydride, trimethylolpropane, pentaerythritol and mixtures thereof.

5. The film of claim 1 wherein monomer (D) is selected from isophthalic acid, terephthalic acid, isophthalic acid (C_1-C_3) alkyl ester, terephthalic acid (C_1-C_3) alkyl ester, bis(2-hydroxyethyl)terephthalate, bis(2-hydroxyethyl)isophthalate, hydrocarbyl substituted derivatives thereof and mixtures thereof.

6. A laminated product comprising a plurality of layers, including

i) at least one layer, the layer comprising an oxygen scavenger composition comprising a condensation polymer and a transition metal salt, compound or complex, wherein said polymer comprises mer units derived from

(A) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by hydrogen, hydrocarbyl, X and/or Y group(s) or mixtures thereof to fill its valence state;

X and Y each independently represents $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is hydrogen atom or a C_1-C_{12} alkyl group, or X and Y together represent $-(CH_2)_n-C=O)_x-D$ with x being 2, n being an integer in the range from 0 to 20 and D is oxygen atom; and

Z representing a $-(C_tH_{2t-2})-$ hydrocarbylene group with t being an integer in the range from 1-4;

(B) at least one or a mixture of difunctional hydrocarbon compounds according to the following representation:

G-R'-G

wherein

R' represents a C_5 or greater hydrocarbon group selected from alkylene, cycloalkylene or arylene group, and

each G represents a hydroxyl or an amino group;

(C) at least one or a mixture of polyfunctional hydrocarbon compounds according to the following representation:

$$J\text{-}R''(\text{-}J)_z$$

wherein

R" represents a C_2-C_{20} hydrocarbon group selected from alkylene, cycloalkylene, arylene, alkarylene or aralkylene groups or mixtures thereof;

J represents a functional group selected from -OH, $-NH_2$, -N=C=O and $-(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR''' group, wherein R''' is an -H, or C_1-C_{12} alkyl group, or two J groups together represents $-(CH_2)_n$-C=O)$_x$-D with n being an integer of from 0 to 20, D being an oxygen atom and x being 2;

z is an integer of from 2 to 5; and

(D) at least one or a mixture of monomer compounds selected from isophthalic acid, terephthalic acid, tetrahydroisophthalic acid, tetrahydroterephthalic acid, hydrogenated isophthalic acid, hydrogenated terephthalic acid, C_1-C_{12} alkyl esters thereof, anhydride derivatives thereof, and hydrocarbyl derivatives thereof and lower C_1-C_5 glycol ester derivatives thereof; and

ii) at least one layer comprising a material selected from the group consisting of

a) a polymeric article,

b) a paper article, and

c) a metal article.

7. The laminated product of claim 6 wherein monomer (A) is selected from *cis*-1,2,3,6-tetrahydrophthalic anhydride; and dimethyl-1,2,3,6-tetrahydrophthalate.

8. The laminated product of claim 6 wherein monomer (B) is selected from 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol and mixtures thereof.

9. The laminated product of claim 6 wherein the monomer (C) is selected from benzenepentacarboxylic acid, benzenehexacarboxylic acid, trimellitic anhydride, pyromellitic dianhydride, trimethylolpropane, pentaerythritol and mixtures thereof.

10. The laminated product of claim 6 wherein monomer (D) is selected from isophthalic acid, terephthalic acid, isophthalic acid (C_1-C_3) alkyl ester, terephthalic acid (C_1-C_3) alkyl ester, bis(2-hydroxyethyl)terephthalate, bis(2-hydroxyethyl)isophthalate, hydrocarbyl substituted derivatives thereof and mixtures thereof.

11. The laminated product of claim 6 wherein the polymeric article comprises a bottle.

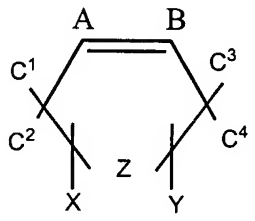
12. The laminated product of claim 6 wherein the polymeric article comprises a tray.

13. The laminated product of claim 6 wherein the paper article comprises a gable top carton.

14. The laminated product of claim 6 wherein the metal article comprises a can.

15. An oxygen scavenger composition comprising a condensation polymer and a transition metal salt, compound or complex, wherein said polymer comprises mer units derived from

(A) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by hydrogen, hydrocarbyl, X and/or Y group(s) or mixtures thereof to fill its valence state;

X and Y each independently represents $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is hydrogen atom or a C_1-C_{12} alkyl group, or X and Y together represent $-(CH_2)_n-C=O)_x-D$ with x being 2, n being an integer in the range from 0 to 20 and D is oxygen atom; and

Z representing a $-(C_tH_{2t-2})-$ hydrocarbylene group with t being an integer in the range from 1-4;

(B) at least one or a mixture of difunctional hydrocarbon compounds according to the following representation:

$$G\text{-}R'\text{-}G$$

wherein

R' represents a C_5 or greater hydrocarbon group selected from alkylene, cycloalkylene or arylene group, and

each G represents a hydroxyl or an amino group;

(C) at least one or a mixture of polyfunctional hydrocarbon compounds according to the following representation:

$$J\text{-}R''(\text{-}J)_z$$

wherein

R" represents a C_2-C_{20} hydrocarbon group selected from alkylene, cycloalkylene, arylene, alkarylene or aralkylene groups or mixtures thereof;

J represents a functional group selected from -OH, $-NH_2$, -N=C=O and $-(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR'" group, wherein R'" is an -H, or C_1-C_{12} alkyl group, or two J groups together represents $-(CH_2)_n$-C=O)$_x$-D with n being an integer of from 0 to 20, D being an oxygen atom and x being 2;

z is an integer of from 2 to 5; and

(D) at least one or a mixture of monomer compounds selected from isophthalic acid, terephthalic acid, tetrahydroisophthalic acid, tetrahydroterephthalic acid, hydrogenated isophthalic acid, hydrogenated terephthalic acid, C_1-C_{12} alkyl esters thereof, anhydride derivatives thereof, and hydrocarbyl derivatives thereof and lower C_1-C_5 glycol ester derivatives thereof.

16. The composition of claim 15 wherein monomer (A) is selected from *cis*-1,2,3,6-tetrahydrophthalic anhydride; and dimethyl-1,2,3,6-tetrahydrophthalate.

17. The composition of claim 15 wherein monomer (B) is selected from 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol and mixtures thereof.

18. The composition of claim 15 wherein the monomer (C) is selected from benzenepentacarboxylic acid, benzenehexacarboxylic acid, trimellitic anhydride, pyromellitic dianhydride, trimethylolpropane, pentaerythritol and mixtures thereof.

19. The composition of claim 15 wherein monomer (D) is selected from isophthalic acid, terephthalic acid, isophthalic acid (C_1-C_3) alkyl ester, terephthalic acid (C_1-C_3) alkyl ester, bis(2-hydroxyethyl)terephthalate, bis(2-hydroxyethyl)isophthalate, hydrocarbyl substituted derivatives thereof and mixtures thereof.

20. The composition of claim 15 wherein the transition metal is present in from 0.001 to 1 weight percent based on the total weight of the mixture.

21 The composition of claim 15 wherein the transition metal is present as a salt selected from the group consisting of cobalt neodecanoate, cobalt 2-ethylhexanoate, cobalt oleate, cobalt acetylacetonate, and cobalt 2-ethylbutyrate.

22. The composition of Claim 15 wherein the composition comprises an effective amount of a photoinitiator.

23. The composition of claim 15 wherein the oxygen scavenger composition comprises a diluent polymer selected from the group consisting of ethylene polymer and copolymer, polyester, polyvinyl chloride, polyvi-

nylidene dichloride, polycaprolactone, polyamide, polycarbonate, polyurethane, polyether, polypropylene, polystyrene, and copolymers and mixtures thereof.

24. The composition of claim 15 wherein

a) the condensation polymer is derived from monomer (C) in the amount of from 300 to 15,000 parts per million based on the total monomer content used,

b) the condensation polymer is derived from monomer (D) in the amount of from 2 to 25 molar percent of the total of monomers (A) and (D), and

c) the molar ratio of carboxylic acid, acid ester, acid halide and isocyanate groups to hydroxyl and amine groups of monomers (A), (B), (C) and (D) is from 0.9 to 1.1.